

## SCIENCE FOR THE PEOPLE.

**INDIAN ANTIQUITIES.**—Further discoveries have been made on the Creek farm, in Iowa, where the relics were found several months ago by the Rev. Mr. Gass, which have been the subject of so much discussion as to their genuineness. The new discoveries were made after prolonged and fruitless exploration, by a party which included the secretary of the Department of Science. Under a boulder with them they found a cavity containing a limestone tablet, on which is engraved, very roughly, a human figure astride a circle, with radial lines extending from it as if to represent the sun. Within the circle is a crescent, which may or may not represent the moon. The human figure seems to be holding some emblems of authority. Over his head is an engraving represents a copper axe, such as has been elsewhere found in Indian graves. At each corner a "bird pipe" is buried; the head of each bird had quartz crystals set eyes, but these are now detached; they had been fastened by some kind of white pitch, which has lost its adhesive power. Characters made with lines and dots also appear on this tablet, and it is stated that five of these characters are identical with those found on the slabs discovered last year, which have excited so much discussion. The principal figures, and the pipes and axe, are colored a bright red. A shell was found containing the red pigment used for coloring these figures. There are several other tools of similarity, besides those above noticed, to the tablets found last year.

**ALLEGED CURE FOR HYDROPHOBIA.**—Mrs. Jane Gray Swisshelm contributes the following to the long list of reputed cures for hydrophobia: Grate two ounces of the dried root of elecampane and boil it in a pint of new milk. Two ounces of the decoction are to be taken on each of three successive mornings (in all six ounces) while fasting; and the patient is to fast six hours after taking the medicine. Mrs. Swisshelm speaks of the cure as very numerous, and instances one that was effected after seven days. As doctors generally admit that no remedy of any cure for hydrophobia can be found within the profession, it is not intrusive and may be service.

**LIMIT TO SIZE OF TELESCOPES.**—In a recent lecture before the Chestnut Street Club of Boston, Professor Benjamin Peirce, of Harvard University, adverted to the difficulties that attend the use of large telescopes. He thinks that the instrument at Cambridge (10-inch refractor) has proved richer in results than the one at Chicago (\$2,000 each) or the Naval Observatory telescope (26-inch). Atmospheric disturbances interfere most with the largest instruments. There are only two or three nights in the year when the Cambridge telescope can be used to the best advantage, and Professor Peirce thinks that a glass of ten or twelve inches is more serviceable than a larger one. He is reported as saying that a good night for the Washington telescope cannot be expected more than once in three or four years. If much larger instruments are constructed, they are not likely to be of service more than once in a century. These views seem exaggerated.

**BURNING POWDER IN GUNS.**—A correspondent of *Forest and Stream* suggests a method of making cartridges which will burn their powder to greater advantage than in the ordinary loading. He connects the ball to a roll of paper that is lined with an explosive compound; the roll is about one eighth of an inch thick and two inches long; it reaches the rear end of the cartridge case, and the gunpowder is fired in around it. The powder will thereby be thoroughly fired, and its force will be expended against the base of the ball. It is stated that a smaller quantity of powder can be effectively used in such cartridges; the penetrating power of the ball is increased, and the recoil of the gun is diminished.

**COST OF THE ELECTRIC LIGHT.**—The varying estimates of the cost of electric illumination have been noticed previously in this column. A statement appears in a French paper to the effect that the alternate current required for the Jablochek electric candle makes it about eight times as expensive as it would be if worked by a uniform current. The cost for a light of 1,000 candle-power is said to be about 4 francs (80 cents) per hour. On the other hand, the Brush dynamo-electric machine—an American invention—is represented as furnishing light of 12,000 candle-power at 61 cents per hour. The estimate is thus made for the work of the Brush machine and candle: Fuel per hour, 160 pounds of coal, 10 cents; oil, waste, etc., 2 cents; carbons burnt in four lamps, 15 cents; per cent on cost, for interest and wear, 13 cents; wages of engineer, 20 cents; total, 61 cents. Product through four lamps, a Brush unit of that of 800 gas burners, each of five feet per hour. Comparative cost of light by gas, thirteen times that of electricity. It will be seen that the estimated cost of the light from the Brush candle is one sixteenth of that from the Jablochek system. The estimate of the higher densities comes from a rival; that of the former from a friend of the inventor; but the discrepancy is beyond all explanation.

**PHYSIC FOR GRASSHOPPERS.**—Poisonous qualities are popularly attributed to the castor-oil bean, the fruit of *Eichornia crassipes*. According to the statements of a California newspaper, this property extends to the leaves, sufficiently to make them of use in destroying insects. By distributing the leaves where grasshoppers were numerous, great numbers of the insects were soon killed. The effect of the poison upon the grasshopper is said to be apparent very shortly after it eats a portion of a leaf. The insect seems half dead, vainly attempting to crawl or fly, and finally, tumbling over, dies.

**ADVENTURES OF A METEORITE.**—Professor Lewis Swift, of Rochester, well known as a discoverer of comets, describes a meteorite recently obtained from August, Co., Va. Three others, of similar general characteristics, have been found in that part of Virginia, and it is surmised that they all fell in one shower of stones. The extreme dimensions of this meteorite are 18, 11½ and 8 inches; its weight is 152 pounds. It was originally found in 1858 or 1859, on a farm near Staunton, by a negro, who noticed its great weight, and carried it five miles to find a purchaser, but vainly, though he offered it for \$1. It laid for several years behind a blacksmith's shop. Then it was used in building a stone fence, but it was heavy and shapeless, it soon fell out. A dentist afterward selected it as suitable for use as an anvil in hammering out gold plates. The stone next formed part of the wall of a cistern, and was there recognized for the first time as a meteorite by Mr. M. A. Miller, of Staunton.

**SPIDERS TRAVELLING AROUND THE WORLD.**—At a recent meeting of the Philadelphia Academy of Sciences, the Rev. Dr. McCook contributed an interesting essay on spiders. One species, the *Sarcoptes scabiei*, is distributed, with little variation in form or color, all around the world. From a cabinet specimen, he could trace it (going westward) from the extreme eastern limit of this continent to the extreme western coast of Africa. He has found the line of distribution to coincide with the belt of northern trade winds. He thinks the spiders migrated from point to point by throwing out the threads and suspending themselves so as to be carried by the wind. So far as he has been able to prosecute the inquiry, there is a corresponding line of distribution for these spiders in countries swept by the southern trade winds. The theory needs further facts as to the presence or absence of these insects on islands in the ocean, before it can be fully accepted; but verified it may help to determine the open questions as to the missing continents, since it cannot be supposed that the spiders could cross wide spaces of water.

**REQUISITES OF GOOD SEWERAGE.**—In a lecture before the Social Science Association last Monday Colonel George E. Ward, Jr., of Newport, R. I., laid down the principles of effective sewerage. The sewer should be so tight as to prevent all leakage. Its fall or inclination need not be great, but must be regular, giving an equal cleansing velocity of 120 feet per minute in every part, with no dead water. Ampule ventilation should be secured by manholes and open gratings 100 yards apart, and by tubes in each house, connected with the soil-pipe and opening above the roots. Free discharge at the outlet of the sewer, and the means for flushing it periodically, must also be provided. With these precautions, there need be no sewer gas. The size of the sewer should be carefully adjusted to the volume it will have to carry; so that heavy rains will flush and cleanse it, carrying out all heavy substances and other things that would cause stagnation and obstruction if the sewer were disproportioned to its strength.

**IMPROVEMENT IN GOLD REFINING.**—The proprietor of a refining mill in Nevada is credited by *The Gold Hill News* with a profitable improvement in the business. A large amount of sulphate of copper is used in treating the so-called "tailings," and the amalgam of gold and silver which the mill produces, contained so much copper that it was reduced in value 26 per cent. A roasting furnace and a still mill for grinding the amalgam, as it comes from the retorts, is now put in the furnace and heated twelve hours. It is then put up in pieces of the size of a pea, and again heated for two or eighteen hours till the copper is oxidized. The business embraces all branches of the manufacture of books, their sale and the publication of periodicals. *Christian Advocate* (weekly) are issued from New-York, Syracuse, Pittsburgh, Cincinnati, St. Louis, Chicago, San Francisco, Portland (Or.), Atlanta, and New-Orleans. The sales of the New-York house and its depositories for the year ending December 31, 1877, were \$83,913. The capital above all liabilities is \$974,100. The sales of the Cincinnati house and its depositories, in the same period, was \$658,471. Its net capital is \$429,474. The net capital of the two houses is \$1,494,

billion direct from the ore. The process seems to be new in that locality.

## RELIGIOUS INTELLIGENCE.

The General Synod of the Irish Episcopal Church meets on the 30th of April.

The Rev. Dr. S. H. Tyng will prepare a history of the work of St. George's Church during the long period of his pastorate.

The question of the use of instrumental music in public worship is hotly discussed by the Presbyterians of Ireland. It is certain to come up in the next General Assembly.

The Church Journal (Protestant Episcopal), after an interval of fifty-one years, has been merged in *The Churchman*. The late editors will, it is expected, be contributors to *The Churchman*.

The World's Conference of Young Men's Christian Associations will be held, this year, at Geneva, Switzerland, August 14-20. Arrangements are making for an excursion farther from New-York by way of Scotland and England.

Mr. Spurgeon's health has so far improved that he is expected to resume duty in his church by the middle of March. The Tabernacle has now 5,045 members. During 1877, 437 members were added; 337 removed, leaving a net increase of 100.

Hawaii has had its centennial. The exact date was January 18, 1878. Little notice was, however, taken of the event, except in *The Friend*, the bright newspaper, long edited by an American missionary, and now the oldest periodical sheet in the Pacific. The first missionaries arrived at Honolulu, April 18, 1820.

The New-York City Methodist Church Extension Society has now under its care 15 churches and chapels, with 2,119 members and probationers, and 4,000 Sunday-school scholars. The church property held is valued at \$431,000, on which there is an indebtedness of \$127,000. Fifteen pastors and assistants are employed.

The arrangements for the International Sunday-school Convention, to be held at Atlanta, Ga., April 17-19, are reported to be complete. The detailed programme will soon be issued. Round-trip tickets from New-York to Atlanta, good for thirty days, will be sold for \$45.15; from Philadelphia, \$32.75. This will be a delegate convention.

The church debt paying movement goes on with great vigor. Besides the subscription of \$45,000 by Dr. Talmage's congregation, \$26,000 by the Fifth Avenue Baptist (Dr. Armitage's), \$22,000 by the Church of the Covenant (Dr. Vincent's), the Taft Presbyterian and Church of Cincinnati, has paid a debt of \$6,000; and the South Congregational Church of Brooklyn, \$2,000.

The Supreme Consistory of the Established Protestant Church of Prussia have forbidden the Parish of St. James, Berlin, the ground of this order is to assume the pastoral charge of the Parish of St. James, Berlin. He is reported as saying that a good night for the Washington telescope cannot be expected more than once in three years. If much larger instruments are constructed, they are not likely to be of service more than once in a century. These views seem exaggerated.

It may well be doubted whether the means of Mars or the companion of Saturn would have been found by means of the smaller instruments, though after the observations were made with the larger telescopes.

The facts objects were derived and studied with intense optical power. They have as much depends in the use of the telescope upon the acuteness of vision and the industry of the observer, as upon the size of the instrument.

The religious press of the country receives

with great cordiality the appointment of Bayard Taylor to the post of Minister to Germany. Speaking of former representatives of our country at Berlin, especially Messrs. Wheaton and Bauer, *The Evangelist* of this city says: "Mr. Taylor will prove a worthy successor to these men, and will preserve unimpaired the traditions of American learning and ability, and American honor."

The Baltimore Methodist Conference, the first of the "Spring Conferences" to meet, which begins session on Wednesday next, in Cumberland, Maryland, has charge of 350 churches, valued at \$2,757,500, and containing 32,000 members and probationers. The highest salary given to any pastor is \$4,000, and the lowest about \$200; the average is stated to be \$3,000. There are forty-seven Methodist Episcopal churches in Baltimore, four of them for Germans and six for colored members.

Mr. Cook's private receipts, in which all shades of theological opinions are represented, from orthodoxy to pantheism, are said to be very enjoyable occasions. The venerable Mr. Alcott takes a leading part; Unitarianism is represented by Dr. Bartol; and Congregationalism of the most liberal type by the Rev. Mr. Dudley; Andover by Professor Mead; the Congregational House by Dr. Taber, etc., etc. Recently Mr. Alcott gave a "conversation" on Immortality.

The Baltimore Methodist Conference, the

first of the "Spring Conferences" to meet, which begins session on Wednesday next, in Cumberland, Maryland, has charge of 350 churches, valued at \$2,757,500, and containing 32,000 members and probationers. The highest salary given to any pastor is \$4,000, and the lowest about \$200; the average is stated to be \$3,000. There are forty-seven Methodist Episcopal churches in Baltimore, four of them for Germans and six for colored members.

Mr. Cook's private receipts, in which all shades of theological opinions are represented, from orthodoxy to pantheism, are said to be very enjoyable occasions.

The venerable Mr. Alcott takes a leading part;

Unitarianism is represented by Dr. Bartol; and Congregationalism of the most liberal type by the Rev. Mr. Dudley; Andover by Professor Mead; the Congregational House by Dr. Taber, etc., etc. Recently Mr. Alcott gave a "conversation" on Immortality.

The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "the purpose of securing the constant maintenance in Boston of evangelical preaching, with fees paid; for the employment of clerical and missionary labor in Boston and elsewhere; and for the support of missions abroad." The Tremont Temple Society (Ghilbert), of Boston, have a property of which the assessed value is \$15,000. On this is a debt of \$125,000. The income from the temple is \$9,500; from the rest of rooms for offices, \$8,500; from the Temple, \$6,000. The society was established by Boston Baptists for "